

REMARKS:

Claims 1-7, 9-16, 18-25, and 27-30 are currently pending in the subject Application.

Claims 8, 17, and 26 have been previously canceled without prejudice.

Claims 1-7, 9-16, 18-25, and 27-30 stand rejected under 35 U.S.C. § 112, first and second paragraphs.

Claims 1-7, 9-16, 18-25, and 27 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,219,649 to Jameson ("*Jameson*").

Claims 28-30 stand rejected under 35 U.S.C. § 103(a) over *Jameson* in view of *Christenson* (U.S. Patent Application Publication No.: 20020049759) and in further view of *Supply Chain Management: Strategy, Planning, and Operation*, Prentice Hall, October 2000, by *Chopra et al.* ("*Chopra*").

The Applicants respectfully submit that all of the Applicants arguments and amendments are without *prejudice* or *disclaimer*. In addition, the Applicants have merely discussed example distinctions from the cited prior art. Other distinctions may exist, and as such, the Applicants reserve the right to discuss these additional distinctions in a future Response or on Appeal, if appropriate. The Applicants further respectfully submit that by not responding to additional statements made by the Examiner, the Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by the Applicants are considered sufficient to overcome the Examiner's rejections. In addition, the Applicants reserve the right to pursue broader claims in this Application or through a continuation patent application. No new matter has been added.

REJECTION UNDER 35 U.S.C. § 112 FIRST AND SECOND PARAGRAPHS:

The Applicants respectfully submit that the Examiner's rejections of Claims 1-3, 9, 10, 12, 18, 19, 21, and 27 under 35 U.S.C. §112 First and Second Paragraphs have been rendered moot in light of the foregoing Amendments.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1-7, 9-16, 18-25, and 27-30 stand rejected under 35 U.S.C. § 103(a) over *Jameson*. Claims 28-30 stand rejected under 35 U.S.C. § 103(a) over *Jameson* in view of *Christenson*, in further view of *Chopra*.

The Applicants respectfully submit that *Jameson* fails to disclose, teach, or suggest each and every element of Claims 1-7, 9-16, 18-25, and 27-30. The Applicants further respectfully submit that currently amended independent Claims 1, 9, 10, 18, 19, and 27 contain unique and novel limitations that are not disclosed, suggested, or even hinted at in *Jameson*. Thus, the Applicants respectfully traverse the Examiner's obviousness rejection of Claims 1-7, 9-16, 18-25, and 27-30 under 35 U.S.C. § 103(a) over *Jameson*.

Applicants Respectfully Traverse the Examiner's Finding of Official Notice

The Examiner has apparently asserted Official Notice in alleging that "a resource allocation method *is* a supply chain planning problem." (26 July 2007 Office Action, Page 6). (Emphasis Added). The Applicants respectfully traverse the Examiner's taking of Official Notice.

While the Examiner has asserted that "a resource allocation method *is* a supply chain planning problem" the Examiner has set forth no authority or reasoning tending to substantiate this equation. Accordingly, Applicants specifically traverse the Examiner's apparent taking of Official Notice. It is well-settled that only "in limited circumstances," is it "appropriate for an examiner to take official notice of facts not in the record or to rely on common knowledge in making a rejection." (Please see MPEP § 2144.03). Moreover, **"official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are *capable of instant and unquestionable demonstration as being well-known*."** As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner

must be ‘*capable of such instant and unquestionable demonstration as to defy the dispute*’ (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 U.S.P.Q. 6 (C.C.P.A. 1961)).” (MPEP § 2144.03(A)).

Additionally, the applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.” (MPEP § 2144.03(B)). (Emphasis Added).

The above noticed Examiner’s conclusory statement ***does not adequately address the issue that this statement is considered to be common knowledge or well-known in the art***, in fact, ***it merely presupposes what it concludes***. The Applicants respectfully submit that the Office Action provides no documentary evidence to support the Official Notice taken by the Examiner, yet the asserted facts are not capable of “instant and unquestionable” demonstration as being well-known. ***The Applicants respectfully request the Examiner to produce authority for the Examiner’s statement “resource allocation is part of supply chain management.***

The Applicant respectfully submits that the Examiner provides *no* documentary evidence to support the Official Notice taken by the Examiner, yet the asserted facts are not capable of “instant and unquestionable” demonstration as being well-known. The Applicants further submit that the Applicants have adequately traversed the Examiner’s assertion of Official Notice and direct the Examiner’s attention to the pertinent text of the MPEP, which states:

If applicant adequately traverses the examiner’s assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (“[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings” to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2). (MPEP § 2144.03(C)).

Thus, if the Examiner continues to maintain the rejection of dependent claims 2 and 28 based on the Examiner's Official Notice, the Applicant respectfully requests that the Examiner provide documentary evidence as necessitated by MPEP § 2144.03(C). Furthermore, if the Examiner is relying on personal knowledge the Applicants further request that the Examiner provide an Affidavit or Declaration setting forth specific factual statements and explanation to support the finding as further necessitated by MPEP § 2144.03(C).

The Examiner's Own Remarks Make Clear that a Resource Allocation Method Is NOT a Supply Chain Planning Problem.

The Examiner acknowledges on Page 6 of the 26 July 2007 Office Action that "resource allocation is a **part** of supply chain management." (Emphasis added). From this acknowledgment, it is clear that "resource allocation" is but **one component** of "supply chain management" and is not equivalent in and of itself. Accordingly, since the Examiner has clearly acknowledged that "resource allocation" is a **mere piece** of "supply chain management" the Examiner's assertion that "a resource allocation method **is** a supply chain planning problem" cannot be logically substantiated.

Put another way, the Examiner's acknowledgement that "resource allocation is a **part** of supply chain management" clearly undermines the Examiner's taking of Official Notice that "a resource allocation method **is** a supply chain planning problem." After all, if "resource allocation" is but a **part** of "supply chain management," as the Examiner acknowledges, then "resource allocation" itself cannot be a mere component **part** of "supply chain management" and simultaneously equivalent thereto.

Accordingly, since by the Examiner's own acknowledgment Jameson discloses but a **part** of Applicants' claimed invention, and not **each and every limitation** thereof, a finding of obviousness cannot be properly supported. Specifically, Applicants respectfully submit that, in an obviousness situation, the **prior art must disclose each and every element of the claimed invention**. (Please see *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002)). (Emphasis Added). Likewise, conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at

1434-35. Specifically, Applicants respectfully argue that each and every element of Applicants' claimed invention is **not** present in the prior art, either individually or in combination.

The Proposed *Jameson-Official-Notice* Fails to Disclose, Teach, or Suggest Various Limitations Recited in Applicants Claims

For example, with respect to amended independent claim 1, this claim recites:

A computer-implemented method for solving a supply chain planning problem, comprising:

decompositioning the supply chain planning problem into a plurality of independent sub-problems;

providing ***a plurality of distributed database partitions***, each partition of said plurality of distributed database partitions associated with a respective independent sub-problem of said supply chain planning problem;

operating ***a plurality of processors in said database***, each processor of said plurality of processors associated with a respective partition of said plurality of distributed database partitions;

forming a plurality of distributed sub-problem partitions, each of said distributed sub-problem partitions including a plurality of related items and associated with a respective independent sub-problem of said supply chain planning problem;

loading data into a plurality of distributed database partitions, said data associated with said plurality of related items, and each of said distributed database partitions associated with a respective one of each of said distributed sub-problem partitions; and

solving each of said plurality of said independent sub-problems by separate processes operating in parallel in said database. (Emphasis Added).

Amended independent claims 9, 10, 18, 19, and 27 recite similar limitations. Neither *Jameson*, nor the Examiner's Official Notice, discloses each and every limitation of amended independent claims 1, 9, 10, 18, 19, and 27.

As noted above, the Examiner has acknowledged that *Jameson* discloses but a **part** of Applicants' claimed invention, and not **each and every limitation** thereof. Therefore, as noted above, a finding of obviousness cannot be properly supported. The Applicants respectfully submit that *Jameson* has nothing to do with amended

independent claim 1 limitations regarding “**decompositioning the supply chain planning problem into a plurality of independent sub-problems**”. Rather *Jameson* discloses a method of allocating *resources* in an uncertain environment. (Abstract and Column 1, Lines 10-15).

Particularly, the Examiner apparently equates “**decompositioning the supply chain planning problem into a plurality of independent sub-problems,**” recited in amended independent Claim 1, with the process of dividing the allocation problem into simpler sub-problems disclosed in *Jameson*. (26 July 2007 Office Action, Page 6). Nevertheless, the process for dividing the allocation problem into simpler sub-problems disclosed in *Jameson* **does not include dividing a large-scale supply chain planning problem, or even any supply chain planning problem, and is not even related to a supply chain planning problem in the first place.** (Column 7, Lines 45-54).

In contrast to *Jameson*, the algorithm recited in amended independent claim 1 is generated for dividing large-scale supply chain planning problems into a plurality of independent sub-problems and to identify clusters and create partitions made up of the clusters. Thus, the Applicants respectfully submit that the equations forming the foundation of the Examiner’s comparison between *Jameson* and amended independent claim 1 cannot be made. The Applicants further respectfully submit that these distinctions alone are sufficient to patentably distinguish amended independent claim 1 from *Jameson*.

The Applicants further respectfully submit that *Jameson* has *nothing* to do with amended independent claim 1 limitations regarding “large scale supply chain planning” but rather “resource allocation.” As mentioned above, the Examiner has acknowledged the lack of equivalence between “resource allocation” and supply chain planning,” noting at least that resource allocation is only a “**part**” of supply chain planning. Thus, the Applicants respectfully submit that the equations forming the foundation of the Examiner’s comparison between *Jameson* and amended independent claim 1 cannot be made. The Applicants further respectfully submit that these distinctions alone are sufficient to patentably distinguish amended independent claim 1 from *Jameson*.

The Applicants respectfully submit that the Office Action acknowledges, and the Applicants agree, that *Jameson* fails to disclose the emphasized limitations noted above in amended independent claim 1. Specifically the Examiner acknowledges that *Jameson* fails to teach **a computer-implemented method for solving a supply chain planning problem**. (26 July 2007 Office Action, Page 6). Nevertheless, as noted above, it appears as though the Examiner has asserted Official Notice over the acknowledged shortcomings in *Jameson*. Once again, the Applicants respectfully traverse the Examiner's assertions regarding any subject matter disclosed in *Jameson* or the Examiner's Official Notice. The Applicants further submit that *Jameson* or the Examiner's Official Notice have nothing to do with amended independent claim 1 limitations regarding **"a computer-implemented method for solving a supply chain planning problem"**.

The Applicants further respectfully submit that the Office Action has failed to properly establish a *prima facie* case of obviousness based on the proposed combination of *Jameson* or the Examiner's Official Notice, either individually or in combination. The Office Action has not shown the required teaching, suggestion, or motivation in these references or in knowledge generally available to those of ordinary skill in the art at the time of the invention to combine these references as proposed. The Office Action merely states that "it would have been obvious, at the time of the invention, for one of ordinary skill in the art to use the *Jameson* resource allocation method for solving supply chain problems". The Applicants respectfully disagree.

The Applicants further submit that this purported advantage relied on by the Examiner is nowhere disclosed, taught, or suggested in *Jameson* or the Examiner's Official Notice, either individually or in combination. The Examiner asserts that the motivation to combine the references as proposed would be because **"resource allocation is part of supply chain management."** (26 July 2007 Office Action, Page 6). As discussed at length above, the Applicants respectfully disagree and further respectfully request clarification as to how the Examiner arrived at this conclusion.

In particular, the Applicants respectfully request how the Examiner arrived at the conclusion that "a resource allocation problem is a supply chain planning problem." (26

July 2007 Office Action, Page 6). As another example, to what extent does the Examiner purport that “solving a resource allocation problem” applies to the subject Application. The Applicants respectfully request the Examiner to point to the portions of Jameson or the Examiner’s Official Notice which contain the teaching, suggestion, or motivation to combine these references for the for the Examiner’s stated purported advantage. In particular, the Applicants respectfully request the Examiner to point to the portions of *Jameson* or the Examiner’s Official Notice which expressly state that “**resource allocation is part of supply chain management**”.

The Applicants further submit that the Examiner is using the subject Application as a template to formulate reconstructive hindsight, which constitutes impermissible use of hindsight under 35 U.S.C. § 103(a).

A recent Federal Circuit case makes it crystal clear that, in an obviousness situation, the **prior art must disclose each and every element of the claimed invention**, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). (Emphasis Added). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. With respect to the subject Application, the **Examiner has not adequately supported the selection and combination of Jameson or the Examiner’s Official Notice** to render obvious the Applicants claimed invention. The Examiner’s conclusory statements that “it would have been obvious, at the time of the invention, for one of ordinary skill in the art to use the Jameson resource allocation method for solving supply chain problems” and that “**because resource allocation is part of supply chain management**”, **does not adequately address the issue of motivation to combine**. (15 March 2006 Final Office Action, Page 8). This factual question of motivation is material to patentability, and cannot be resolved on subjective belief and unknown authority. *Id.* It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). Thus, **the Office Action fails to provide proper**

motivation for combining the teachings of Jameson or the Examiner's Official Notice, either individually or in combination.

A recent Federal Circuit case makes it crystal clear that, in an obviousness situation, the ***prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art.*** *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). (Emphasis Added). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. With respect to the subject Application, the ***Examiner has not adequately supported the selection and combination of Jameson or Fierro to render obvious the Applicants claimed invention.*** The Examiner's conclusory statements that "it would have been obvious at the time of the invention, to one of ordinary skill in the art to incorporate the advantages of sizing the sub-problem partitions as close to equal as possible as taught by *Fierro* to *Jameson's* system" and that "in order to more efficiently solve the sub-problems and ***increase the overall efficiency of the system***, which is the goal of *Jameson*", ***does not adequately address the issue of motivation to combine.*** (15 March 2006 Final Office Action, Page 8). This factual question of motivation is material to patentability, and cannot be resolved on subjective belief and unknown authority. *Id.* It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). Thus, ***the Office Action fails to provide proper motivation for combining the teachings of Jameson or Fierro***, either individually or in combination.

The Applicants Claims are Patentable over the *Jameson*

The Applicants respectfully submit that amended independent Claim 1 is considered patentably distinguishable over *Jameson*. This being the case, amended independent Claims 9, 10, 18, 19, and 27 are also considered patentably distinguishable over *Jameson*, for at least the reasons discussed above in connection with amended independent Claim 1.

Furthermore, with respect to dependent Claims 2-7, 11-16, 20-25, and 28-30: Claims 2-7 and 28 depend from amended independent Claim 1; Claims 11-16 and 29 depend from amended independent Claim 10; and Claims 20-25 and 30 depend from amended independent Claim 19. As mentioned above, each of amended independent Claims 1, 9, 10, 18, 19, and 27 are considered patentably distinguishable over *Jameson*. Thus, dependent Claims 2-7, 11-16, 20-25, and 28-30 are considered to be in condition for allowance for at least the reason of depending from an allowable claim.

For at least the reasons set forth herein, the Applicants respectfully submit that Claims 1-7, 9-16, 18-25, and 27-30 are not rendered obvious by *Jameson*. The Applicants further respectfully submit that Claims 1-7, 9-16, 18-25, and 27-30 are in condition for allowance. Thus, the Applicants respectfully request that the rejection of Claims 1-7, 9-16, 18-25, and 27-30 under 35 U.S.C. § 103(a) be reconsidered and that Claims 1-7, 9-16, 18-25, and 27-30 be allowed.

THE LEGAL STANDARD FOR OBVIOUSNESS REJECTIONS UNDER 35 U.S.C. § 103:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, ***there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.*** Second, there must be a reasonable expectation of success. Finally, ***the prior art reference*** (or references when combined) ***must teach or suggest all the claim limitations.*** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, ***and not based on applicant's disclosure.*** *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Moreover, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); M.P.E.P. § 2143.03.

With respect to alleged obviousness, ***there must be something in the prior art as a whole to suggest the desirability***, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The consistent criterion for determining obviousness is whether the prior art would have suggested to one of ordinary skill in the art that the process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988); M.P.E.P. § 2142.

A recent Federal Circuit case makes it clear that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

CONCLUSION:

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

Although the Applicants believe no fees are deemed to be necessary; the undersigned hereby authorizes the Commissioner to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 500777**. If an extension of time is necessary for allowing this Response to be timely filed, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) to the extent necessary. Any fee required for such Petition for Extension of Time should be charged to **Deposit Account No. 500777**.

Please link this application to Customer No. 53184 so that its status may be checked via the PAIR System.

Respectfully submitted,

24 October 2007
Date

/Steven J. Laureanti/signed
Steven J. Laureanti, Registration No. 50,274

BOOTH UDALL, PLC
1155 W. Rio Salado Pkwy., Ste. 101
Tempe, AZ, 85281
214.636.0799 (mobile)
480.830.2700 (office)
480.830.2717 (fax)
steven@boothudall.com

CUSTOMER NO. 53184